CROATIA—2013

**The Mineral Industry of Croatia**

By Sinan Hastorun

Croatia is a moderately developed country located in the western part of the Balkan Peninsula. One of the six former Republics of Yugoslavia, Croatia borders Bosnia and Herzegovina, Hungary, Montenegro, Serbia, and Slovenia. The country occupies most of the eastern Adriatic Sea shoreline, giving it the largest territorial water area among Balkan countries suitable for offshore exploration (Croatia.eu, 2013a, c). Croatia produced a limited number of mineral commodities, none of which were produced in a quantity that was significant on a world or regional scale. Mineral resources included clays, dolomite, gypsum, limestone, natural gas, petroleum, and salt. Crude petroleum and natural gas extraction and refining remained the major economic activities of Croatia’s mineral industry. The country moved towards launching its first round of offshore hydrocarbon exploration licensing in 2014 following the completion of a petroleum and gas survey of its territorial waters in the Adriatic Sea. The iron and steel sector was revived following production stoppages in 2012. The country remained reliant on mineral commodity imports for the bulk of its industrial and energy needs. Most industrial mineral output was consumed by the domestic market, particularly by the construction sector (Agency for Investments and Competitiveness, 2013; Croatian Hydrocarbon Agency, 2014a).

**Government Policies and Programs**

Croatia became a full member of the European Union (EU) on July 1 following 8 years of accession negotiations conducted with the European Commission. During this process, the country undertook major economic reforms to transition fully into a functioning market economy. The implemented changes affected every industry of the economy, but particularly the mineral sector (European Commission, 2014). The Concession Act (passed in December 2012), the Mining Act (April 2013), and the Hydrocarbons Exploration and Exploitation Act (July 2013) replaced the Mining Act of 2009, as amended, and aligned Croatia’s mining and hydrocarbon laws with those of the EU, as required by the EU-Croatia Accession Treaty (Macesic and Manovelo, 2013b).

The Mining Act of 2013 and the Concession Act of 2012 introduced a new licensing and concession regime on exploration and production of mineral resources in Croatia. The previous Mining Act (2009) and its amendments (2011) had restored greater control of mineral resource development to the Government by requiring licensed companies to begin exploration and extraction projects within a specified and relatively short period of time. Among other provisions of the older law, an exploration permit did not guarantee a resource exploitation license (Macesic, 2011). The new Mining Act (2013) establishes greater procedural transparency and sets in place defined criteria, conditions, and requirements for obtaining authorization to explore for and produce mineral commodities in Croatia. It also opens public tendering procedures to all interested entities, as required by the nondiscrimination clauses of the EU Hydrocarbon Licensing Directive 94/22/EC (Santic, 2013).

The Hydrocarbons Exploration and Exploitation Act (known as the Hydrocarbon Act) of 2013 is the third major component of recent legal reforms that established a complete legal framework for natural gas and petroleum exploration and extraction in Croatia. Under the Act, hydrocarbon exploration and extraction are no longer regulated under the Mining Act. In line with the provisions of the Mining Act and the Concession Act, exploration and extraction are still regarded as two separate rights; however, the tender procedure awards successful bidders an exploration license and an automatic right to a concession in the case of discovery. In other words, companies that discover commercially exploitable reserves of hydrocarbons are now entitled to exploit such reserves (Macesic and Manovelo, 2013b).

The Hydrocarbon Act establishes a new Government agency responsible for mineral fuels in Croatia—the Croatian Hydrocarbon Agency. The Agency is authorized to issue tenders and exploitation permits for petroleum and natural gas both onshore and offshore. It is also tasked with monitoring the fulfillment of contractual obligations by permit holders and reporting results to the European Commission. Finally, the Agency is responsible for the preparation of documents on the hydrocarbon potential of Croatia that are presented to potential investors (Croatian Hydrocarbon Agency, 2014b).

With the establishment of the Hydrocarbon Agency, the Mining Department of the Energy and Mining Directorate assumed responsibility for administrative and oversight activities related to the exploration for and extraction of nonfuel minerals. The Department maintained the responsibility for issuing licenses for exploration and extraction of all other minerals, for issuing building permits for mining facilities and plants, and for granting approvals for mining concessions (Energy and Mining Directorate, 2013).

In November, the Government adopted the Strategic Investments Act (SI Act) in an effort to stimulate the economy by increasing investment activity and generating employment in key sectors, such as energy, infrastructure, irrigation and the environment, and tourism in Croatia. Private high-value-added investment projects related to the energy sector, as well as those related to business support, development, and innovation; infrastructure; and manufacturing were defined as eligible to qualify as strategic and receive financial support from the Government. The SI Act, which took effect on November 14, established a special investment regime with an accelerated permit process for eligible strategic projects (Vidan, 2013; U.S. Department of State, 2014).
Minerals in the National Economy

In 2013, Croatia’s economy continued to contract, albeit at a slower rate than in 2012. The country’s gross domestic product (GDP) decreased by 1% in real terms following a 2% decrease in the previous year. The nominal GDP in current dollars in 2013 was $57.5 billion, slightly up from $56.5 billion. This was the Croatian economy’s fifth consecutive year of recession since the global economic crisis of 2008, during which time the GDP decreased by 12% on a cumulative basis. The country’s ongoing recession was partly owing to a “spillover effect” from the economic turmoil in the euro area countries and partly a result of lower domestic demand for goods and services and other structural factors that limited the country’s economic competitiveness. The Croatian current account balance turned positive in 2013, with a surplus of 1.3% of the GDP. This positive balance, however, was mainly because the decrease in imports was larger than the decrease in exports, reflecting a continued weakening of trade and foreign demand for Croatian goods. As the restructuring of key industries (such as petrochemicals) continued, exports of coke and refined petroleum products decreased further (European Bank for Reconstruction and Development, 2014; World Bank, The, 2014a, b).

In 2012 (the latest year for which data were available), the mineral sector was a relatively modest component of Croatia’s national economy, generating about 5.6% of the gross value added compared with 5.3% in 2011. Among its components, the manufacture of coke and refined petroleum products accounted for 2.2%; the manufacture of fabricated metal products, except machinery and equipment, 1.4%; mining and quarrying, 0.7%; the manufacture of other nonmetallic mineral products, 0.7%; the manufacture of chemicals and chemical products, 0.4%; and the manufacture of base metals, 0.2%. The gross value added of the manufacture of coke and refined petroleum products increased by 12.2%; that of the manufacture of fabricated metal products, except machinery and equipment, by 2.6%; and that of mining and quarrying, by 2.4%, respectively, compared with that of 2011. On the other hand, the gross value added of the manufacture of base metals decreased by 9.8%; that of the manufacture of chemicals and chemical products, by 3.5%; and that of the manufacture of other nonmetallic mineral products, by 0.8%, respectively, compared with that of 2011. As of March 2013, the mining and quarrying sector comprised 386 registered and 291 active business enterprises and employed 5,262 people compared with 430 registered and 290 active enterprises and 5,593 employees in 2012 (Croatian Bureau of Statistics, 2013, p. 81, 141; 2014, p. 85, 147, 211–213).

The value of annual production of mineral raw materials in Croatia was estimated to be about $1.06 billion. Mineral fuels, including oil, gas, and condensate, accounted for 88% of the total value, and industrial minerals, including construction stone, dimension stone, and carbonate raw materials for industrial processing, accounted for the remaining 12% (Lismore-Scott, 2013; Santic, 2013).

Mineral commodities continued to be Croatia’s leading import category; mineral commodity exports were insignificant to the economy, with the exception of coke and refined petroleum products. In 2013, Croatia imported about EUR2.173 billion ($2.775 billion)1 worth of mining and quarrying products (including crude petroleum and natural gas), which was an increase of 0.7% compared to their level in 2012, and exported about EUR166 million ($212 million) worth, which was an increase of 42%. Energy imports amounted to EUR3.567 billion ($4.555 billion), which was a decrease of 5.2% compared with their value in 2012, whereas energy exports were worth EUR1.314 billion ($1.678 billion), which was an increase of 1.4%. Imports of crude petroleum and natural gas accounted for EUR2.027 billion ($2.589 billion), which was up by 0.3%, and made up about 12.3% of total Croatian imports. Coke and refined petroleum products imports and exports were significant in terms of their effect on the national economy and on domestic energy consumption. Imports of coke and refined petroleum products were valued at about EUR987 million ($1.26 billion), which was a decrease of 14.6% compared with their value in 2012, and accounted for 6.0% of total imports. Exports of coke and refined petroleum products amounted to EUR1.0 billion ($1.28 billion), which was a decrease of 11.3%, and made up 10.4% of total Croatian exports. Imports of chemicals and chemical products increased in value by 2.9% to EUR1.382 billion ($1.765 billion); that of fabricated metal products, except machinery and equipment, by 9.7% to EUR568 million ($725 million); that of coal and lignite, by 8.5% to EUR83.4 million ($106.5 million); and that of metal ores, by 14.8% to EUR9.3 million ($11.9 million). Imports of base metals decreased by 2.1% to EUR936 million ($1.2 billion), and that of other nonmetallic mineral products, by 18.9% to EUR227.2 million ($290.2 million) (Croatian Bureau of Statistics, 2013, p. 394, 396).

Production

In 2013, the production of most mineral commodities changed only slightly compared with their production levels in 2012. The production of steel recommenced after all but ceasing in 2012, and was on track to increase significantly in 2014 following the modernization at the ABS Sisak d.o.o. plant in Sisak and the sale and modernization of the Zeljezara plant in Split under new ownership (Agency for Investments and Competitiveness, 2013; Daskalovic, 2013a). Bentonite production was reported after 4 years of no production.

The mineral commodities for which output increased significantly in 2013 included rolled aluminum, for which output increased by 30%; crushed and brown stone, by 11%; clinker, by 11%; and hydraulic cement, by 8%. Gypsum and anhydrite output decreased by 37%; aluminum alloys, by 19%; ceramic clay, by 19%; sand and gravel, by 13%; and lime by 11%. Carbon black was not produced, as production had been halted in 2009 by Petrokemija d.d. because of the lack of consumer demand (Petrokemija d.d., 2014, p. 33). Mineral fuels, including natural gas and petroleum, were produced, but their output levels were not sufficient to wholly meet domestic fuel demand (Croatia.eu, 2013b; Honoré, 2014, p. 88). Natural gas production decreased by 8% compared with that of 2012, whereas crude petroleum output was unchanged (table 1).

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1Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US$) at the rate of EUR0.783=US$1.00.
Structure of the Mineral Industry

All mineral producers were wholly privately owned, except for mineral fuel producer INA-Industrija nafte d.d. (INA). INA was jointly owned by the Government (44.84% interest), Magyar Olaj-es Gazipari (MOL) Group of Hungary (49.08% interest), and others (6.08% interest) (INA-Industrija nafte d.d., 2013b). The leading mineral production companies were aluminum producers TLM-TVP d.o.o. and TLM-TPP d.o.o., each of which was owned by Fintrust Holding GmbH of Austria; iron and steel producers ABS Sisak d.o.o. (owned by Danieli Group of Italy), and Adria Steel Ltd. (owned by Techcom GmbH of Germany); and cement producers Cemex Hrvatska d.d. (owned by CEMEX S.A.B. de C.V. of Mexico) and Holcim (Hrvatska) d.o.o. (owned by Holcim Ltd. of Switzerland) (table 2).

Commodity Review

Metals

Aluminum.—TLM-TVP was a niche producer of aluminum rolled products and TLM-TPP was a niche producer of aluminum extrusion products. Both companies were spun off in 2009 by their owner Fintrust Holding from the previously state-owned metal-processing conglomerate TLM-Tvornica Lakih Metala, which had a long history of producing and processing aluminum products and was privatized in 2007. TLM-TVP operated the aluminum rolled-product plant in Sibenik in southern Croatia with a capacity of 70,000 metric tons per year (t/yr) of hot- and cold-rolled goods, such as hot-rolled strips, cold-rolled sheets and strips, circles, and thin strips as well as aluminum foil for the construction, packaging, and distribution industries. TLM-TPP produced standard tubes, bars, and profiles, and its aluminum extrusion plant in Sibenik had a capacity of 10,000 t/yr (Fintrust Holding GmbH, 2013).

Ivanal d.o.o. operated an aluminum diecasting plant in Sibenik that had a capacity of 3,000 t/yr and employed 90 employees. The installed capacity included 3,000 t/yr of hydrated alumina and 3,000 t/yr of aluminum. Ivanal’s annual output varied between 1,200 and 2,000 t. The main consumers of its hydrated alumina included the automotive industry (60%), home appliance manufacturers (30%), and furniture makers (10%). Although relatively small-sized, the company exported its niche product to Contitech Vibration Control GmbH of Germany for end use by major European automobile manufacturers in Germany and France (Ivanal d.o.o., 2014).

Iron and Steel.—ABS Sisak (formerly known as CMC Sisak d.d.) was acquired by the Danieli Group of Italy from Commercial Metals Co. (CMC) for about $30.4 million in 2012. ABS Sisak began production at the Sisak plant following modernization and installation of new equipment in April (Brnic, 2014). The European Bank for Reconstruction and Development provided a loan of EUR50 million ($64 million) to Danieli in order to restart production in Sisak (European Bank for Reconstruction and Development, 2013). Danieli reported that it would initially produce 4,000 metric tons per month (t/mo) for export to markets in Europe and aimed to increase production to 27,000 t/mo within 15 months (Agency for Investments and Competitiveness, 2013).

In January, Adria Steel announced that it started testing a steel production unit at the Zeljezara Split d.d. steel works, which had lain idle for 4 years. The steel mill was expected to begin regular production in late 2013 following the examination of all machinery and equipment and after all necessary permits were obtained (Daskalovic, 2013a). Adria Celik had acquired Zeljezara Split in 2011. In July, German group Techcom announced that it had become the sole owner of Adria Steel by acquiring the remaining 50% stake of the company from Croatia-based C.I.O.S. (Daskalovic, 2013c).

Industrial Minerals

Cement.—Despite an increase in overall production, 2013 was a year of operational loss for the Croatian cement sector because of lower demand in the country and the broader Balkan region. According to estimates by global cement producer CEMEX, total cement consumption in Croatia and its neighboring countries of Bosnia and Herzegovina and Montenegro decreased by 4.1% to reach 2.9 million metric tons in 2013 (CEMEX S.A.B. de C.V., 2014, p. 72). Cemex Hrvatska was the largest cement producer in Croatia based on its installed capacity of 2.6 Mt/yr. The company’s three cement plants were located in Sveti Juraj, Sveti Kajo, and Kolovoz on the Dalmatian coast. As of December, Cemex Hrvatska had only the largest of these plants was in operation to control inventory levels (CEMEX S.A.B. de C.V., 2014, p. 72). Holcim (Hrvatska) announced in October that it would implement a new operational plan to bring the company back to profitability by 2015. The weakness of the Croatian construction market in the aftermath of the 2008 economic crisis had resulted in a 50% drop in cement sales since 2008. Holcim operated at a loss for the fifth year in a row as a result (Daskalovic, 2013e).

Nexa Grupa d.d., which was another significant producer of cement and other building materials in Croatia, declared bankruptcy in February (Global Cement, 2013). HeidelbergCement AG of Germany, which had heretofore supplied the Croatian market with cement that HeidelbergCement produced in Bosnia and Herzegovina, expressed potential interest in acquiring Nexa Grupa’s Nasicement cement plant in Nasice, which had a capacity of 1 Mt/yr. With this acquisition, HeidelbergCement would be able to expand its cement and concrete operations in the broader Balkan region (HeidelbergCement AG, 2013; Daskalovic, 2013d). In August, Viadukt, a Croatian construction company, and its partners announced that they also planned to make a bid for Nasicement as well as the Nexa Grupa (Daskalovic, 2013b).

Mineral Fuels

In 2011 (the latest year for which data were available), Croatia’s total primary energy supply was provided by petroleum (43%), followed by natural gas (30%), coal (8%), and hydropower (5%). Almost one-half of Croatia’s electricity production came from hydropower plants. The country was
A medium-sized European oil and gas company, INA has continued to be undertaken by INA, although this could change in 2014 with the upcoming tender for hydrocarbon exploration in Croatia’s territorial waters in the Adriatic Sea. A medium-sized European oil and gas company, INA has been jointly owned by the MOL Group of Hungary and the Government since its privatization in 2003 through a public procurement process. The company continued to be the subject of a long-running dispute between the Government of Croatia and the Government of Hungary, which was a partial owner of the MOL Group, concerning control of the management of INA, its sales performance, its gas business, and the current status of modernization of the two petroleum refineries in Rijeka and Sisak. In October, the Government of Croatia announced a public tender for consultants that would conduct dispute-resolution negotiations between other INA shareholders, MOL, and itself. On November 8, the MOL board of directors authorized preparations for the sale of the company’s stake in INA and instructed MOL management to conclude an agreement with the Government of Croatia. On November 26, however, MOL filed a request for arbitration proceedings at the International Center for Settlement of Investment Disputes, claiming that the Government had breached its obligations regarding the company’s investments in INA (Balasz, 2013; Macesic and Manovel, 2013a).

INA was involved in petroleum refining and petroleum products distribution as well as in natural gas and petroleum exploration and production. Its hydrocarbon exploration and production activities were conducted both offshore in the Adriatic Sea and onshore in the Pannonian basin. In 2013, the company reported onshore reserves of 174 million barrels (Mbbl) of oil equivalent and onshore production of 25,300 barrels per day (bbl/d) of oil equivalent. Its offshore reserves were 34.1 Mbbl of oil equivalent, and its offshore production amounted to 11,900 bbl/d. INA’s total production in 2013 was 8,608 bbl/d of crude oil, 2,635 bbl/d of condensate, and 26,198 bbl/d of natural gas. In terms of exploration activities, the company dug seven new exploration wells—five onshore and two offshore. INA reported that four of the five onshore wells had yielded positive results. Through INAgip (a joint-venture company formed with Eni S.p.A. of Italy), INA also began preparations for the drilling and development of the Ika J gasfield. INA’s total export sales increased by 5% in 2013 (INA-Industrija nafte d.d., 2013a; 2014, p. 17).

In September, Spectrum Geo Ltd. of Norway commenced an offshore two-dimensional (2-D) seismic survey of Croatia’s territorial waters in the Adriatic Sea in preparation for the first offshore licensing round to be held in April 2014. Spectrum completed the survey on January 19, 2014, which provided for the first time approximately 15,000 kilometers of current long-offset 2-D data offshore Croatia. The company and the Ministry of the Economy announced that the collected data pointed to prospective hydrocarbon deposits in Croatian waters and would be used to define blocks for the public call for tenders. Based on the survey, Spectrum Geo Ltd. estimated that Croatia could have offshore reserves of 3 billion barrels of crude oil, which would be the second highest reserves among European countries after Norway (MacDowall, 2014; Spectrum Geo Ltd., 2014; U.S. Energy Information Administration, 2014).

Croatia was also involved in the planning of two future natural gas pipeline projects—the South Stream and the Southern Gas Corridor projects, which would transport gas to European markets from Russia and Azerbaijan, respectively. In January, Gazprom of Russia signed an Action Plan with the Croatian natural gas transmission system operator Plinacro d.o.o to implement the South Stream project in Croatia between 2013 and 2016. The signed document envisaged setting up a joint company in the second half of the year that would build the gas branch in the country. Gazprom also planned to build a 500-megawatt-capacity powerplant in Osijek in eastern Croatia in cooperation with the local utility company Hrvatska Elektropriveda d.d. (Gazprom, 2013; Kuzmanovic and Shiryaevskaya, 2013). In December, the Government of Azerbaijan signed a memorandum of understanding on future gas supplies to Albania, Croatia, and Montenegro through the Southern Gas Corridor. The pipeline would transport natural gas from the Shah Deniz field in the Caspian Sea to Europe. The authorization of the Shah Deniz-2 project transitioned the project from the planning stage to the implementation stage (Aliyev, 2013).

Outlook

Croatia is expected to remain a modest producer of mineral commodities in the near future, although increases in industrial mineral output could materialize as the modernization of and investment into the country’s cement and steel producers continue. Mineral fuels are expected to remain the most economically significant output of the Croatian mineral sector. Although the country will most likely remain heavily dependent on imports of mineral fuels, exploration and extraction of prospective reserves of crude petroleum and natural gas in the Adriatic Sea have the potential to turn the country into a significant regional energy producer. This possibility hinges on whether the upcoming tender for hydrocarbon exploration in Croatian waters attracts sufficient interest from major multinational energy companies. If successful, the tender could yield significant new investment in the country’s energy sector and could eventually lessen Croatia’s dependence on mineral fuel imports to meet its energy needs. The planned liquefied natural gas (LNG) terminal on the island of Krk is likely to generate additional demand for perlite to be used in insulation for cryogenic tanks. The country’s booming tourism industry is expected to get an additional boost from EU accession through the arrival of more European tourists. In turn, increased tourism activity in Croatia is projected to lead to increased growth in new construction and renovation of hotels, which would further increase demand for industrial minerals used by the construction
sector (Lismore-Scott, 2013). The country’s membership in the EU is also expected to increase domestic production and exports through unrestricted access to the large European market and trade with other EU member states. Challenges will persist in the short-run, however, especially given the country’s loss of preferential export status to the Central European Free Trade Agreement (CEFTA) region following its EU accession, which has already subtracted from the country’s economic growth (World Bank, The, 2014b).

References Cited


### TABLE 1
CROATIA: PRODUCTION OF MINERAL COMMODITIES

(Metric tons unless otherwise specified)

<table>
<thead>
<tr>
<th>Commodity</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>METALS</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum:</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
| Alloys                            | 24,738  
   Estimated | 20,974  
   Revised | 36,988  
   Revised | 41,772  
   Revised | 33,692  
   Revised |
| Semimanufactures:                 | 6,000  
   Revised | 6,000  
   Revised | 8,000  
   Revised | 8,000  
   Revised | 8,000  
   Revised |
| Rolled                            | 50,000  
   Revised | 50,000  
   Revised | 60,000  
   Revised | 69,924  
   Revised | 90,629  
   Revised |
| Extruded                          | 6,000  
   Revised | 6,000  
   Revised | 8,000  
   Revised | 8,000  
   Revised | 8,000  
   Revised |
| Total                             | 56,000  
   Revised | 56,000  
   Revised | 68,000  
   Revised | 77,900  
   Revised | 98,600  
   Revised |
| Steel:                            |          |          |          |          |          |
| Crude, from electric furnaces:    | 43,000  
   Revised | 95,000  
   Revised | 96,000  
   Revised | 1,000  
   Revised | 28,000  
   Revised |
| Semimanufactures, hot rolled:     | 51,583  
   Revised | 93,000  
   Revised | 100,000  
   Revised | 1,000  
   Revised | 28,000  
   Revised |
| **INDUSTRIAL MINERALS**           |          |          |          |          |          |
| Cement:                           |          |          |          |          |          |
| Portland cement                   | 2,838  
   Revised | 2,682  
   Revised | 2,577  
   Revised | 2,154  
   Revised | 2,333  
   Revised |
| Other hydraulic cement            | 81  
   Revised | 93  
   Revised | 105  
   Revised | 100  
   Revised | 103  
   Revised |
| Total hydraulic cement            | 2,919  
   Revised | 2,775  
   Revised | 2,681  
   Revised | 2,255  
   Revised | 2,436  
   Revised |
| Clinker                           | 2,439  
   Revised | 2,116  
   Revised | 2,072  
   Revised | 1,999  
   Revised | 2,210  
   Revised |
| **Clays:**                        |          |          |          |          |          |
| Bentonite                         | --  
   Revised | --  
   Revised | --  
   Revised | --  
   Revised | --  
   Revised |
| Ceramic clay                      | 120,901  
   Revised | 97,237  
   Revised | 67,914  
   Revised | 86,303  
   Revised | 69,619  
   Revised |
| Gypsum and anhydrite, crude       | 221,888  
   Revised | 197,606  
   Revised | 167,518  
   Revised | 182,557  
   Revised | 114,450  
   Revised |
| Lime                              | 350  
   Revised | 240  
   Revised | 254  
   Revised | 207  
   Revised | 185  
   Revised |
| Nitrogen, N content of ammonia    | 309  
   Revised | 361  
   Revised | 368  
   Revised | 342  
   Revised | 343  
   Revised |
| Pumice and related materials, volcanic tuff | 15  
   Revised | 15  
   Revised | 15  
   Revised | 20  
   Revised | 20  
   Revised |
| Salt, all sources                 | 57,186  
   Revised | 66,835  
   Revised | 55,963  
   Revised | 46,000  
   Revised | 42,502  
   Revised |
| Sand and gravel, excluding glass sand | 3,250  
   Revised | 3,500  
   Revised | 4,000  
   Revised | 3,683  
   Revised | 3,199  
   Revised |
| Silica sand (quartz, quartzite, glass sand) | 278,231  
   Revised | 240,919  
   Revised | 227,437  
   Revised | 106,276  
   Revised | 102,070  
   Revised |
| **Stone:**                        |          |          |          |          |          |
| Crushed and brown                 | 17,652  
   Revised | 13,270  
   Revised | 13,033  
   Revised | 11,152  
   Revised | 12,409  
   Revised |
| Dimension stone                   | 1,400,000  
   Revised | 1,200,000  
   Revised | 1,400,000  
   Revised | 1,028,230  
   Revised | 973,784  
   Revised |
| Sulfur, byproduct of petroleum    | 10,315  
   Revised | 6,834  
   Revised | 7,254  
   Revised | 17,411  
   Revised | 15,902  
   Revised |
| **MINERAL FUELS AND RELATED MATERIALS** |          |          |          |          |          |
| Carbon black                      | 3,976  
   Revised | --  
   Revised | --  
   Revised | --  
   Revised | --  
   Revised |
| Natural gas, gross production     | 2,705  
   Revised | 2,727  
   Revised | 1,872  
   Revised | 2,013  
   Revised | 1,862  
   Revised |
| Petroleum:                        |          |          |          |          |          |
| Crude, gross weight, includes condensate | 5,758  
   Revised | 5,344  
   Revised | 4,929  
   Revised | 4,605  
   Revised | 4,605  
   Revised |
| Refinery products:                |          |          |          |          |          |
| Distillate fuel oil               | 11,100  
   Revised | 9,750  
   Revised | 8,437  
   Revised | 13,790  
   Revised | 13,800  
   Revised |
| Residual fuel oil                 | 7,100  
   Revised | 5,788  
   Revised | 4,868  
   Revised | 3,363  
   Revised | 3,400  
   Revised |
| Jet fuel                          | 752  
   Revised | 752  
   Revised | 942  
   Revised | 776  
   Revised | 780  
   Revised |
| Liquefied petroleum gases         | 3,434  
   Revised | 2,854  
   Revised | 2,482  
   Revised | 1,865  
   Revised | 1,900  
   Revised |
| Motor gasoline                    | 12,070  
   Revised | 10,940  
   Revised | 8,710  
   Revised | 10,841  
   Revised | 10,900  
   Revised |
| Other products                    | 5,658  
   Revised | 5,256  
   Revised | 5,400  
   Revised | 5,600  
   Revised | 5,700  
   Revised |
| Total                             | 40,114  
   Revised | 35,340  
   Revised | 30,839  
   Revised | 36,235  
   Revised | 36,500  
   Revised |

*Estimated; estimated data are rounded to no more than three significant digits.  
Estimated; revised data are rounded to no more than three significant digits.  
Revised.  
**Ditto.  
---Zero.

1Reported figure.

3Data may not add to totals shown because of independent rounding.
**TABLE 2**
CROATIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2013
(Thousand metric tons unless otherwise specified)

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Major operating companies and major equity owners</th>
<th>Location of main facilities</th>
<th>Annual capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum, semimanufactures</td>
<td>TLM-TVP d.o.o. (Fintrust Holding GmbH, 100%)</td>
<td>Sibenik</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>do.</td>
<td>do.</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>do. Top-Tvornica Olovni Proizvoda Aluminijskih d.d.</td>
<td>Sveta Nedjelja</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>do. Ivanal d.o.o.</td>
<td>Sibenik</td>
<td>3</td>
</tr>
<tr>
<td>Carbon black</td>
<td>Petrokemija d.d.</td>
<td>Kutina</td>
<td>32,000</td>
</tr>
<tr>
<td>Cement</td>
<td>Cemex Hrvatska d.d. (CEMEX S.A.B. de C.V., 100%)</td>
<td>Plants at Sveti Juraj, Sveti Kajo, and Kolovez</td>
<td>2,600</td>
</tr>
<tr>
<td></td>
<td>do. Holcim (Hrvatska) d.o.o. (Holcim Ltd., 100%)</td>
<td>Plant at Koromacno</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>do. Calucem d.o.o. (CALUCEM Group)</td>
<td>Plant at Pula</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>do. Tvrnica Cementa Umag d.o.o.</td>
<td>Cement plant at Umag</td>
<td>350</td>
</tr>
<tr>
<td></td>
<td>do. Nasicecement d.d. (Nexe Grupa d.d.)</td>
<td>Nasice</td>
<td>680</td>
</tr>
<tr>
<td>Natural gas</td>
<td>INA-Industrija nafta d.d. (MOL Group, 49.08%; Government, 44.84%; others, 6.08%)</td>
<td>Natural gasfields at Molve, offshore platforms in the Adriatic Sea, and other locations</td>
<td>3,000</td>
</tr>
<tr>
<td>Petroleum:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crude</td>
<td>do.</td>
<td>Oilfields at Kalinovac, Sandrovac, Struzec, Zutica, and other locations</td>
<td>15 (^{a})</td>
</tr>
<tr>
<td></td>
<td>do.</td>
<td>Refinery at Rijeka (Urinj)</td>
<td>4,500</td>
</tr>
<tr>
<td></td>
<td>do.</td>
<td>Refinery at Sisak</td>
<td>2,250</td>
</tr>
<tr>
<td>Salt</td>
<td>Solana Pag d.d.</td>
<td>Pag Island (marine salt)</td>
<td>15,000</td>
</tr>
<tr>
<td></td>
<td>Small producers</td>
<td>Ston, Nin</td>
<td>5,000</td>
</tr>
<tr>
<td>Steel, crude</td>
<td>ABS Sisak d.o.o. (Danieli Group, 100%)</td>
<td>Plant at Sisak</td>
<td>324</td>
</tr>
<tr>
<td></td>
<td>do. Adria Steel Ltd. (Techcom GmbH, 100%)</td>
<td>Plant at Split</td>
<td>50 (^{1})</td>
</tr>
</tbody>
</table>

\(^{a}\)Estimated. Do., do. Ditto. NA Not available.